

REMARKS

Claims 22 and 25-42 have been examined.

Applicant thanks the Examiner for the allowance of claims 22 and 25-31.

Claims 32-42 have been rejected under 35 USC 102(e)¹ as being anticipated by Awano (2002/0163079). Applicant respectfully traverses this rejection for the reasons set forth below.

Claim 32 recites, inter alia:

a first nanoelement on which at least one predetermined region is covered with catalyst material in a form of at least one cluster for catalyzing the growth of nanoelements, wherein the first nanoelement is covered with the catalyst material by bringing the first nanoelement into *operative contact with a suspension* having clusters of catalyst material, and removing the first nanoelement with at least one cluster attached thereto from the suspension; and

at least one second nanoelement grown on the catalyst material.

(Emphasis added.)

The Examiner asserts in the paragraph bridging pages 2 and 3 of the Office Action the following:

Awano discloses forming a first nanoelement, covering the first nanoelement in a predetermined region with a catalyst material for catalyzing growth of nanoelements, and growing a second nanoelement on the catalyst material (Fig. 5A-6; para. 0088-0097). Awano does not disclose covering the first nanoelement with catalyst material by bringing the nanoelement into contact with a suspension. However, claims 32-43 are

¹ Since Awano issued on November 7, 2002, and the present application was filed more than one year later on November 12, 2003, the Examiner's rejection should have been under 102(b) rather than 102(e).

product-by-process claims. “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of the product does not depend on its method of production. If the product in the product-by-process claims is the same as or obvious from a product of the prior art, the claim is ~~is~~ not patentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695,698, 227 USPQ 964,966 (Fed. Cir. 1985). In the instant case, the product as defined by the structural limitations recited in claim 32, is anticipated by Awano.

The Examiner is correct — a product-by-process limitation does not have by itself any patentable weight in a product claim since it is the final structure of the product which carries weight for patentability purposes. However, a product-by-process limitation *has* patentable weight in a product claim if it results in a structurally distinct product and if the nature of the structural distinction is not known or can not be easily recited in the claims. This is believed to be the case in the invention of the instant application.

In paragraph 0058 the instant application states that “[t]he oleic acid sheath by which the iron clusters 102 are surrounded evidently serves as a *bonding layer* for bonding the iron clusters 102 to the carbon nanotubes 110.” (Emphasis added.) Consequently, as stated in paragraph 0026, “nanoelements are introduced into a suspension of clusters, the clusters bond to the surface of the nanoelements *as it were of their own accord*.” (Emphasis added.)

Consequently, the product-by-process of bringing the nanoelement into operative contact with a suspension having clusters of catalyst material results in a *different and superior* product. Therefore, independent claim 32, along with dependent claims 33-42, is not anticipated by Awano. Reconsideration and withdrawal of the prior art rejection is therefore respectfully requested.

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In view of the above, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

By Laura C. Brutman

Laura C. Brutman

Registration No.: 38,395

DICKSTEIN SHAPIRO MORIN &
OSHINSKY LLP

1177 Avenue of the Americas

41st Floor

New York, New York 10036-2714

(212) 835-1400

Attorney for Applicant